IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s):	Cole et al.
Docket No.:	YOR920030610US1
Serial No.:	10/799,052
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Group:	2167
Examiner:	Miranda Le

Title: Evaluation of Spatial Rules over a Mobile Population

CORRECTED APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants hereby submit this Corrected Appeal Brief in response to the Notification of Non-Compliant Appeal Brief dated September 1, 2009. The original Appeal Brief was submitted on September 8, 2008 to appeal the final rejection dated April 2, 2008, of claims 1 through 46 of the above-identified patent application.

REAL PARTY IN INTEREST

The present application is assigned to International Business Machines Corporation, as evidenced by an assignment recorded on April 20, 2004 in the United States Patent and Trademark Office at Reel 014531, Frame 0661. The assignee, International Business Machines Corporation, is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences.

STATUS OF CLAIMS

Claims 1 through 46 are presently pending in the above-identified patent application. Claims 1-46 are rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. (United States Patent Number 6,650,902). Claims 5, 9, 10, 16, 17, 28, 31, 36-42, and 44-46 are being appealed.

STATUS OF AMENDMENTS

There have been no amendments filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Claims 5 and 28 require wherein there are a plurality of entities, each entity corresponding to one or more attributes, and wherein the one or more results comprise indications of which entities of the plurality of entities have attributes resulting in a change in status of the evaluation of the one or more rules between a first evaluation of the one or more rules and a second evaluation of the one or more rules (page 33, lines 21-34).

Claim 9 requires the steps of associating a side effect with the one or more rules and performing the side effect if the one or more rules evaluate to a predetermined one of a plurality of states (page 28, lines 28-32).

Claims 10 and 31 require the steps of: receiving a plurality of supplied rules; determining if evaluation of one or more given rules of the supplied rules produces one or more constant results for at least a selected time period; and preventing evaluation of the one or more given rules for the selected time period (page 4, lines 25-29).

Claim 16 requires wherein each of the nodes corresponds to a defined coverage region, and wherein the step of evaluating further comprises the step of a given one of the plurality of nodes evaluating rules for entities in a defined coverage region corresponding to the given node (page 4, lines 12-29).

Claim 17 requires wherein each of the entities has a corresponding set of one or more rules, wherein a given one of the nodes determines which of the plurality of entities are within a coverage region corresponding to the given node, and wherein the

given node performs the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are within the coverage region and does not perform the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are not within the coverage region (page 4, lines 12-29).

Independent claim 36 is directed to, in a communication network (FIG. 1: 100), a method for evaluating rules (page 3, line 29, to page 4, line 6), the method comprising the steps of: receiving one or more rules from an application (page 11, lines 30-31; and page 12, lines 7-12); and sending a trigger to said application based on said one or more rules (page 11, line 34, to page 12, line 6; and page 12, lines 16-20).

Independent claim 37 is directed to an article of manufacture for evaluating rules (page 3, line 29, to page 4, line 6), the article of manufacture comprising: a computer readable storage medium containing one or more programs which when exccuted implement the steps of: receiving one or more rules from an application (page 11, lines 30-31; and page 12, lines 7-12); and sending a trigger to said application based on said one or more rules (page 11, line 34, to page 12, line 6; and page 12, lines 16-20).

Independent claim 38 is directed to, in a communication network (FIG. 1: 100), an apparatus for evaluating rules (page 3, line 29, to page 4, line 6), the apparatus comprising: at least one computer system comprising: one or more memories; and one or more processors coupled to the one or more memories, the one or more processors configured: receive one or more rules from an application (page 11, lines 30-31; and page 12, lines 7-12); and send a trigger to said application based on said one or more rules (page 11, line 34, to page 12, line 6; and page 12, lines 16-20).

Independent claim 39 is directed to, in a communication network (FIG. 1: 100), an apparatus for evaluating rules (page 3, line 29, to page 4, line 6), the apparatus comprising: at least one computer system comprising: one or more memories; and one or more processors coupled to the one or more memories, the one or more processors configured: receive one or more rules in one or more nodes (page 11, lines 30-31; and page 12, lines 7-12); and reduce said one or more rules based on subscribers associated

with one or more of said nodes (page 19, line 21, to page 20, line 18).

Claims 40 and 44 require wherein said rule reduction is based on a location of a node (page 19, lines 20-30).

Claims 41 and 45 require wherein said rule reduction is based on one or more attributes of one or more of said subscribers (page 19, line 20, to page 20, line 18).

Claims 42 and 46 require wherein said rule reduction is based on a movement of one or more of said subscribers (page 19, line 20, to page 20, line 18).

Independent claim 43 is directed to, in a communication network (FIG. 1: 100), a method for evaluating rules (page 3, line 29, to page 4, line 6), the method comprising the steps of: receiving one or more rules in one or more nodes (page 11, lines 30-31; and page 12, lines 7-12); and reducing said one or more rules based on subscribers associated with one or more of said nodes (page 19, line 21, to page 20, line 18).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-46 are rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al.

ARGUMENT

Independent Claims 36-38

Independent claims 36-38 were rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton teaches receiving one or more rules (i.e. receiving airline info when within 2 miles of the airport, col. 3, lines 31-62) from an application (i.e. once the threshold, such as 5 miles from the airport, is triggered based upon the location of the wireless mobile unit 201, information is retrieved and modified and results of the expert system of IPA 330 are output from rule-based suggestion engine 600, formatted in element 650, and eventually output in a data push process 660 to the wireless mobile unit 201, through location-based server 221, col. 13, lines 3-23); and sending (i.e. sending data back to the wireless mobile, col. 3, line 63, to col. 4, line 2) a trigger (i.e. alerting, col. 3, line 63, to col. 4, line 2) to said application based on said one or more rules (i.e. location-based controller 301 is, for

example, a computer programmed to orchestrate location-based services, such as those involving sending data back to the wireless mobile unit 201 (examples of data sent including traffic alerting and location-based advertising)). In the Advisory Action, the Examiner further asserts that "rules" correspond to "airline info" because this airline information is integrated into a rule-based decision making of Richton.

Appellants note that the Examiner has equated "receiving one or more rules" with "receiving airline info." Contrary to the Examiner's assertion, *airline information* is *not* equivalent to "one or more *rules*," as would be apparent to a person of ordinary skill in the art. The Examiner's statement also contradicts the Examiner's assertion in the Advisory Action that *airline information is integrated into rule-based decision making; thus, the airline information is not a rule itself.*

More importantly, independent claims 36-38 require *sending a trigger to the **same** entity (the application) from which the rules are received.* Here, the Examiner alleges that the trigger is sent to the wireless mobile and equates the wireless mobile with the application. Thus, *the rules should be received from the wireless mobile.* The Examiner, however, does *not* allege that rules are received from the wireless mobile, and Appellants could find *no* disclosure or suggestion by Richton of receiving rules from the wireless mobile. Independent claims 36, 37, and 38 require *receiving one or more rules from an application*; and *sending a trigger to **said** application* based on said one or more rules.

Furthermore, Appellants note that the Examiner has equated sending a *trigger* to an application with *sending data back to the wireless mobile (alert).* A "trigger," however, is defined as "anything, as an act or event, that serves as a stimulus and initiates or precipitates a reaction or series of reactions." (See, dictionary.com) Contrary to the Examiner's assertion, Richton does *not* disclose or suggest that *sending data back to the wireless mobile (alert)* initiates a reaction or series of reactions. Thus, as would be apparent to a person of ordinary skill in the art, Richton does *not* disclose or suggest *sending a trigger to the application based on the one or more rules.*

Thus, Richton et al. do not disclose or suggest receiving one or more rules from an application; and sending a trigger to said application based on said one or more

rules, as required by independent claims 36, 37, and 38.

Independent Claims 39 and 43

Independent claims 39 and 43 were rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. Regarding claims 39 and 43, the Examiner asserted in the Office Action dated April 2, 2008 that Richton discloses reducing said one or more rules (locations at which services are to be performed, threshold positions/geographic relationships dictating when information is to be obtained, etc., are stored at location-based server 221, col. 7, line 64, to col. 8, line 6) based on subscribers associated with one or more of said nodes.

Appellants note that the Examiner has equated reducing said one or more rules with "locations at which services are to be performed, threshold positions/geographic relationships dictating when information is to be obtained." The present disclosure teaches, however, that:

> *Each node can reduce the rules examined by the node by, for example, determining if the entity corresponding to a rule is not within a coverage region defined for the node or, as another example, whether no portion of a particular geographical region to which a rule corresponds is within the coverage region defined for the node. In reduction situations, the reduced rules could, illustratively, be deleted or ignored.* (Page 2, lines 27-32; emphasis added.)

The act of reducing rules, as required by the cited claims, is an affirmative step. Richton, however, does *not* disclose or suggest the affirmative step of reducing rules. At best, Richton teaches a rule-based decision making where rules are simply stored and await execution. In particular, Richton does not disclose or suggest *reducing one or more rules* or *reducing one or more rules based on subscribers associated with one or more nodes*. Independent claims 39 and 43 require *receiving one or more rules* in one or more nodes; and *reducing said one or more rules based on subscribers* associated with one or more of said nodes.

Thus, Richton et al. do not disclose or suggest receiving one or more rules in a node; and reducing said one or more rules based on subscribers associated with one or more of said nodes, as required by independent claims 39 and 43.

Claims 5 and 28

Claims 5 and 28 were rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton discloses wherein there are a plurality of entities, each entity corresponding to one or more attributes, and wherein the one or more results comprise indications of which entities of the plurality of entities have attributes resulting in a change in status of the evaluation of the one or more rules between a first evaluation of the one or more rules and a second evaluation of the one or more rules (col. 5, lines 44-64).

Appellants note that, in the text cited by the Examiner, Richton teaches:

> *The IPA 330 is further programmable in a known manner, with rules that enable it to suggest schedule changes or modifications.* These may involve interactions with data that are routinely linked for such circumstances (such as weather data or with the schedules of other people that have extensive interactions with the user). The addition of location dependent data in connection with the present invention, which is then used by such a sophisticated programmable IPA 330 to *draw conclusions about scheduling based on its preprogrammed information and based on the user's location, are all factorable into the information transmitted back to the wireless mobile unit 201 of the user*. The user can therefore be informed of not only normal flight schedule information, for example, but of suggested changes and reasons for such changes. These may involve application of a simple rule in the IPA 330, such as a desire of the user to wait a short time should that allow the user to be comfortably put on a preferred airline, or very complex rules, such as diverting a user to another airport in a large metropolitan area such as N.Y. city, to provide a user with a desired opportunity to meet new associates.
> (Col. 5, lines 44-64; emphasis added.)

Richton does not disclose or suggest, however, of wherein the one or more results comprise indications of which entities of the plurality of entities have attributes *resulting in a change in status of the evaluation of the one or more rules between a first evaluation of the one or more rules and a second evaluation of the one or more rules*. Claims 5 and 28 require wherein there are a plurality of entities, each entity corresponding to one or more attributes, and wherein the one or more results comprise indications of which entities of the plurality of entities have attributes resulting in a change in status of the evaluation of the one or more rules between a first evaluation of the one or more rules and a second evaluation of the one or more rules.

Thus, Richton et al. do not disclose or suggest wherein there are a plurality of entities, each entity corresponding to one or more attributes, and wherein the one or more results comprise indications of which entities of the plurality of entities have attributes resulting in a change in status of the evaluation of the one or more rules between a first evaluation of the one or more rules and a second evaluation of the one or more rules, as required by claims 5 and 28.

Claim 9

Claim 9 was rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton discloses the steps of associating a side effect with the one or more rules (col. 12, lines 44-61); and performing the side effect if the one or more rules evaluate to a predetermined one of a plurality of states (col. 4, line 66, to col. 5, line 25).

Appellants note that, in the text cited by the Examiner, Richton teaches:

> Location-based service database 302 further preferably contains a list of services (or instruction information) to be performed in association with a designated wireless mobile unit 201 and the geographic area (places or remote locations/roads/distance/proximity thresholds) that will be considered to meet a criteria for initiating control of services to be performed (i.e., indicating when a geographic relationship has been satisfied). These can be customized by the user. For example, services performed when a user approaches/leaves his/her home/office (remote location) can include retrieving and forwarding to the wireless mobile unit 201, traffic information specific to the roads on which the user is traveling or will be traveling in the near future. Further, unique remote locations such as airports, for example, can be designated such that when the wireless mobile unit 201 is within a certain distance of an airport and has therefore satisfied a designated geographic relationship with a remote location, airline schedule information is received. *Based on stored information, alternate routes of travel can also be provided directly to the wireless mobile unit 201 (when the wireless mobile unit 201 has satisfied a geographic relationship with the remote location or target, such as coming within a predetermined distance thereof, for example).* Other types of information forwarded to the wireless mobile unit include, but are not limited to weather information and personal information (such as email, facsimile, voicemail, etc.).
> (Col. 4, line 66, to col. 5, line 25; emphasis added)

Richton does not disclose or suggest, however, of associating a *side effect with the one or more rules* and *performing the side effect if the one or more rules*

evaluate to a predetermined one of a plurality of states. Claim 9 requires the steps of associating a side effect with the one or more rules and performing the side effect if the one or more rules evaluate to a predetermined one of a plurality of states.

Thus, Richton et al. do not disclose or suggest the steps of associating a side effect with the one or more rules and performing the side effect if the one or more rules evaluate to a predetermined one of a plurality of states, as required by claim 9.

Claims 10 and 31

Claims 10 and 31 were rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton discloses the steps of: receiving a plurality of supplied rules; determining if evaluation of one or more given rules of the supplied rules produces one or more constant results for at least a selected time period; and preventing evaluation of the one or more given rules for the selected time period (steps 404 and 406).

Appellants note that, regarding steps 404 and 406, Richton teaches:

> The criteria checking steps 404 and 406 are the heart of the system. In step 404, *the location of wireless mobile unit 201 is preferably periodically determined/received*. This is preferably done at periodic intervals, e.g., once per second. Next, in step 406, the retrieved criteria are checked at regular intervals, typically timed to mesh with the timing of step 404. For example, in step 406 it is determined whether or not the location information received in step 404 indicates that the wireless mobile unit 201 has satisfied the preset geographic relationship with the target location, e.g. is it within a threshold distance (e.g., 5 miles) of the target location (e.g., "airport"). These two timed processes are "merged" in a manner to check whether the location of the wireless mobile unit 201 of the user meets the criteria or geographic relationship with the target that has been set.
> (Col. 10, line 59, to col. 11, line 6; emphasis added.)

Richton does not disclose or suggest, however, of determining if evaluation of one or more given rules of the supplied rules *produces one or more **constant** results for at least a selected **time period***; and *preventing evaluation of the one or more given rules for the selected **time period***. Claims 10 and 31 require the steps of: receiving a plurality of supplied rules; determining if evaluation of one or more given rules of the supplied rules produces one or more constant results for at least a selected time period; and preventing evaluation of the one or more given rules for the selected

time period.

Thus, Richton et al. do not disclose or suggest the steps of: receiving a plurality of supplied rules; determining if evaluation of one or more given rules of the supplied rules produces one or more constant results for at least a selected time period; and preventing evaluation of the one or more given rules for the selected time period, as required by claims 10 and 31.

Claim 16

Claim 16 was rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton discloses wherein each of the nodes corresponds to a defined coverage region, and wherein the step of evaluating further comprises the step of a given one of the plurality of nodes evaluating rules for entities in a defined coverage region corresponding to the given node (col. 9, lines 51-63).

Appellants note that, in the text cited by the Examiner, Richton teaches:

> For example, and as is clear to those skilled in the art, there are various ways in which the illustrative embodiment can ascertain the location of wireless mobile unit 201. *For example, wireless mobile unit 201 can include a satellite position system receiver (e.g., a Global Positioning System (GPS) receiver, etc.) so that wireless mobile unit 201 can determine its own latitude and longitude. In such a case, wireless mobile unit 201 provides its location to a controlling base station, to WSC 220 and eventually to location-based server 221 when requested.* An example of such an arrangement is taught in U.S. Pat. No. 5,479,482, entitled "Cellular Terminal For Providing Public Emergency Call Location Information," issued Dec. 26, 1995.
> (Col. 9, lines 51-63; emphasis added.)

Richton does not disclose or suggest, however, of wherein each of the nodes corresponds to a defined coverage region, and wherein the step of evaluating further comprises the step of a *given* ***one of the plurality*** *of nodes evaluating rules for entities in a* ***defined coverage region corresponding to the given node***. Claim 16 requires wherein each of the nodes corresponds to a defined coverage region, and wherein the step of evaluating further comprises the step of a given one of the plurality of nodes evaluating rules for entities in a defined coverage region corresponding to the given node.

Thus, Richton et al. do not disclose or suggest wherein each of the nodes corresponds to a defined coverage region, and wherein the step of evaluating further comprises the step of a given one of the plurality of nodes evaluating rules for entities in a defined coverage region corresponding to the given node, as required by claim 16.

Claim 17

Claim 17 was rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton discloses wherein each of the entities has a corresponding set of one or more rules, wherein a given one of the nodes determines which of the plurality of entities are within a coverage region corresponding to the given node, and wherein the given node performs the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are within the coverage region and does not perform the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are not within the coverage region (col. 5, lines 44-64).

Appellants note that, in the text cited by the Examiner, Richton teaches:

> The IPA 330 is further programmable in a known manner, with rules that enable it to suggest schedule changes or modifications. These may involve interactions with data that are routinely linked for such circumstances (such as weather data or with the schedules of other people that have extensive interactions with the user). *The addition of location dependent data in connection with the present invention, which is then used by such a sophisticated programmable IPA 330 to draw conclusions about scheduling based on its preprogrammed information and based on the user's location, are all factorable into the information transmitted back to the wireless mobile unit 201 of the user.* The user can therefore be informed of not only normal flight schedule information, for example, but of suggested changes and reasons for such changes. These may involve application of a simple rule in the IPA 330, such as a desire of the user to wait a short time should that allow the user to be comfortably put on a preferred airline, or very complex rules, such as diverting a user to another airport in a large metropolitan area such as N.Y. city, to provide a user with a desired opportunity to meet new associates.
> (Col. 5, lines 44-64; emphasis added.)

Richton does not disclose or suggest, however, of *determining one or more attributes of the entity, evaluating, and performing one or more actions for those*

nodes of the plurality of nodes that are within the coverage region and does not perform the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are not within the coverage region. Claim 17 requires wherein each of the entities has a corresponding set of one or more rules, wherein a given one of the nodes determines which of the plurality of entities are within a coverage region corresponding to the given node, and wherein the given node performs the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are within the coverage region and does not perform the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are not within the coverage region.

Thus, Richton et al. do not disclose or suggest wherein each of the entities has a corresponding set of one or more rules, wherein a given one of the nodes determines which of the plurality of entities are within a coverage region corresponding to the given node, and wherein the given node performs the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are within the coverage region and does not perform the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are not within the coverage region, as required by claim 17.

Claims 40 and 44

Claims 40 and 44 were rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton discloses wherein said rule reduction is based on a location of a node (col. 7, line 64, to col. 8, line 6).

Appellants note that, in the text cited by the Examiner, Richton teaches:

> Initially, the process begins with step 400 of FIG. 4 wherein the process is initialized at the location-based server 221. *Information to be obtained, sources from which the information is to be obtained, locations at which services are to be performed, threshold positions/geographic relationships dictating when information is to be obtained, etc., are stored at location-based server 221.* Thus, the user

> essentially subscribes for the service and defines the parameters. This process will be described in more detail with regard to FIG. 5.
> (Col. 7, line 64, to col. 8, line 6; emphasis added.)

Richton does not disclose or suggest, however, of *wherein said rule reduction is based on a location of a node*. Claims 40 and 44 require wherein said rule reduction is based on a location of a node.

Thus, Richton et al. do not disclose or suggest wherein said rule reduction is based on a location of a node, as required by claims 40 and 44.

Claims 41 and 45

Claims 41 and 45 were rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton discloses wherein said rule reduction is based on one or more attributes of one or more of said subscribers (col. 8, lines 7-23).

Appellants note that, in the text cited by the Examiner, Richton teaches:

> As previously stated, the steps involved in establishing parameters defining where, when, to whom, and what information is to be obtained and sent are described in FIG. 5, further defining step 400 of FIG. 4. Initially, in step 502, the service to be involved is established. *A user interface at the wireless mobile unit 201 might include location-based services, such as navigation assistance or location-based traffic reports. The user invokes (subscribes and dictates the parameters desired) the location-based service by initializing, either through a menu on his/her wireless mobile phone 201 or through a similar mechanism such as that which could be provided over the Internet.* Alternatives to invoking over the Internet include speaking to an operator or using an IPA (Intelligent Personal Agent). Those skilled in the art will recognize how to construct these various alternative devices for invoking/starting the service, but the menu interface is described further here.
> (Col. 8, lines 7-23; emphasis added.)

Richton does not disclose or suggest, however, of wherein said *rule reduction* is *based on one or more attributes of one or more of said subscribers*. Claims 41 and 45 require wherein said rule reduction is based on one or more attributes of one or more of said subscribers.

Thus, Richton et al. do not disclose or suggest wherein said rule reduction is based on one or more attributes of one or more of said subscribers, as required by claims 41 and 45.

Claims 42 and 46

Claims 42 and 46 were rejected under 35 U.S.C. §102(e) as being anticipated by Richton et al. In particular, the Examiner asserts that Richton discloses wherein said rule reduction is based on a movement of one or more of said subscribers (col. 2, line 59, to col. 3, line 8).

Appellants note that, in the text cited by the Examiner, Richton teaches:

> FIG. 2 is a schematic diagram of a wireless telecommunication system including the location-based server 221 of a preferred embodiment of the present invention. The system includes a wireless switching center (WSC) 220 connecting the location-based server 221 with base stations 203-1 through 203-4, wherein it is understood that the number of base stations is exemplary only. *Such a system is capable of: (1) providing wireless telecommunications service to wireless mobile unit 201, including location-based services based on location of the wireless mobile unit 201; (2) monitoring the movement (changing location) of wireless mobile unit 201 as it remotely travels; and (3) providing location-based information back to the wireless mobile unit 201, based on the observed changing locations of wireless mobile unit 201.* The location-based server 221 is responsible for providing all location-based information services for wireless mobile unit 201.
> (Col. 2, line 59, to col. 3, line 8; emphasis added.)

Richton does not disclose or suggest, however, of wherein said *rule reduction* is *based on a movement of one or more of said subscribers*. Claim 42 and 46 require wherein said rule reduction is based on a movement of one or more of said subscribers.

Thus, Richton et al. do not disclose or suggest wherein said rule reduction is based on a movement of one or more of said subscribers, as required by claims 42 and 46.

Conclusion

The rejections of the cited claims under section 102 in view of Richton are therefore believed to be improper and should be withdrawn. The remaining rejected dependent claims are believed allowable for at least the reasons identified above with respect to the independent claims.

All of the pending claims following entry of the amendments, i.e., claims 1-46, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,

Date: September 30, 2009

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CLAIMS APPENDIX

1. The method of claim 36, further comprising the steps of:

determining one or more attributes of an entity, at least one of the attributes comprising location of the entity;

evaluating said one or more rules to produce one or more results, each of the one or more rules comprising one or more functions that operate on the one or more attributes of the entity; and

performing, based on the evaluation of the one or more rules, one or more actions specified for the one or more rules, wherein at least one of the actions comprises communicating the one or more results to said application.

2. The method of claim 1, wherein the one or more functions comprise a plurality of functions combined through logical operators.

3. The method of claim 2, wherein each of the one or more functions evaluates to one of a plurality of states and wherein the rule evaluates to one of the plurality of states.

4. The method of claim 1, wherein there are a plurality of entities, each entity corresponding to one or more attributes, and wherein the one or more results comprise indications of which entities of the plurality of entities have attributes satisfying the one or more rules.

5. The method of claim 1, wherein there are a plurality of entities, each entity corresponding to one or more attributes, and wherein the one or more results comprise indications of which entities of the plurality of entities have attributes resulting in a change in status of the evaluation of the one or more rules between a first evaluation of the one or more rules and a second evaluation of the one or more rules.

6. The method of claim 1, wherein the communication network comprises a wireless portion, the entity comprises a wireless device, and the entity communicates within the wireless portion of the communication network.

7. The method of claim 1, wherein:

there are a plurality of entities subscribed to the communication network; and

the step of evaluating is performed by a plurality of nodes in the communication network, each node evaluating rules over a subset of the entities.

8. The method of claim 7, wherein the plurality of entities are registered with the communication network so as to be able to communicate with portions of the communication network.

9. The method of claim 1, further comprising the steps of associating a side effect with the one or more rules and performing the side effect if the one or more rules evaluate to a predetermined one of a plurality of states.

10. The method of claim 1, further comprising the steps of:

receiving a plurality of supplied rules;

determining if evaluation of one or more given rules of the supplied rules produces one or more constant results for at least a selected time period; and

preventing evaluation of the one or more given rules for the selected time period.

11. The method of claim 10, wherein the step of preventing evaluation further comprises the step of removing the one or more given rules from the plurality of supplied rules.

12. The method of claim 1, wherein the step of determining one or more attributes of an entity comprises determining the location of the entity.

13. The method of claim 1, wherein the one or more attributes comprise a plurality of attributes, the plurality of attributes further comprising one or more of the following: a mobile station identification, a user identification, a subscriber class, a bearing, and a speed.

14. The method of claim 1, wherein the communication network comprises a plurality of nodes and wherein each of the plurality of nodes performs the steps of determining, evaluating, and performing one or more actions.

15. The method of claim 14, wherein the one or more rules comprise a plurality of rules, wherein a plurality of entities are associated with the communication network, and wherein the method further comprises the step of communicating the plurality of rules to each of the nodes.

16. The method of claim 15, wherein each of the nodes corresponds to a defined coverage region, and wherein the step of evaluating further comprises the step of a given one of the plurality of nodes evaluating rules for entities in a defined coverage region corresponding to the given node.

17. The method of claim 15, wherein each of the entities has a corresponding set of one or more rules, wherein a given one of the nodes determines which of the plurality of entities are within a coverage region corresponding to the given node, and wherein the given node performs the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are within the coverage region and does not perform the steps of determining one or more attributes of the entity, evaluating, and performing one or more actions for those nodes of the plurality of nodes that are not within the coverage region.

18. The method of claim 15, wherein a first node corresponds to a first defined coverage region, a second node corresponds to a second defined coverage region, a given entity has persistent data associated with the given entity, and the first node communicates the persistent data to the second node in response to the given entity leaving the first defined coverage region and entering the second defined coverage region.

19. The method of claim 1, wherein the step of performing one or more actions specified for the one or more rules further comprises the step of sending one or more messages to an application based on the one or more results, the one or more messages corresponding to the one or more results.

20. The method of claim 1, wherein the one or more rules correspond to a plurality of entities, the step of evaluating further comprises the step of evaluating the one or more rules for the plurality of entities to produce one or more results, wherein the one or more results comprise one or more indications as to which of the plurality of entities has attributes satisfying the one or more rules, and wherein the step of performing further comprises the step of communicating one or more messages having the one or more indications to an application.

21. The method of claim 20, wherein the one or more indications comprise a subscriber position record for at least one of the entities meeting the one or more rules.

22. The method of claim 1, wherein the one or more attributes further comprises a subscriber identification, and wherein the one or more rules correspond to one or more geographical regions or one or more subscriber identifications.

23. The method of claim 1, wherein the step of performing, based on the one or more results, one or more actions specified for the one or more rules further comprises the step of communicating a rule-triggered event to the application, wherein the rule-

triggered event is specified for the one or more rules and corresponds to the entity.

24. The article of manufacture of claim 37, wherein said one or more programs which when executed further implement the steps of:

determining one or more attributes of an entity, at least one of the attributes comprising location of the entity;

evaluating said one or more rules to produce one or more results, each of the one or more rules comprising one or more functions that operate on the one or more attributes of the entity; and

performing, based on the evaluation of the one or more results, one or more actions specified for the one or more rules, wherein at least one of the actions comprises communicating the one or more results to said application.

25. The apparatus of claim 38, wherein the one or more processors are further configured:

to determine one or more attributes of an entity, at least one of the attributes comprising location of the entity;

to evaluate said one or more rules to produce one or more results, each of the one or more rules comprising one or more functions that operate on the one or more attributes of the entity; and

to perform, based on the evaluation of the one or more results, one or more actions specified for the one or more rules, wherein at least one of the actions comprises communicating the one or more results to said application.

26. The apparatus of claim 25, wherein the one or more functions comprise a plurality of functions combined through logical operators.

27. The apparatus of claim 25, wherein there are a plurality of entities, each entity corresponding to one or more attributes, and wherein the one or more results comprise indications of which entities of the plurality of entities have attributes satisfying

the one or more rules.

28. The apparatus of claim 25, wherein there are a plurality of entities, each entity corresponding to one or more attributes, and wherein the one or more results comprise indications of which entities of the plurality of entities have attributes resulting in a change in status of the evaluation of the one or more rules between a first evaluation of the one or more rules and a second evaluation of the one or more rules.

29. The apparatus of claim 25, wherein the communication network comprises a wireless portion, the entity comprises a wireless device, and the entity communicates within the wireless portion of the communication network.

30. The apparatus of claim 25, wherein:

there are a plurality of entities subscribed to the communication network;

the communication system comprises a plurality of nodes;

the at least one computer system comprises a plurality of computer systems, each node communicating with one or more of the computer systems; and

each computer system is adapted to evaluate rules over a subset of the entities.

31. The apparatus of claim 25, wherein the processor is further configured:

to receive a plurality of supplied rules;

to determine if evaluation of one or more given rules of the supplied rules produces one or more constant results for at least a selected time period; and

to prevent evaluation of the one or more given rules for the selected time period.

32. The apparatus of claim 25, wherein the one or more attributes comprise a plurality of attributes, the plurality of attributes further comprising one or more of the following: a mobile station identification, a user identification, a subscriber class, a

bearing, and a speed.

33. The apparatus of claim_25,_wherein the at least one computer system comprises a first plurality of computer systems, the communication network comprises a second plurality of nodes, one or more of the nodes communicate with one or more of the computer systems, and each of the plurality of computer systems is adapted to determine, evaluate, and perform one or more actions.

34. The apparatus of claim 25, wherein the one or more processors are further configured, when performing, to send one or more messages to an application based on the one or more results, the one or more messages corresponding to the one or more results.

35. The apparatus of claim 25, wherein the one or more rules correspond to a plurality of entities, the one or more processors are further configured, when evaluating, to evaluate the one or more rules for the plurality of entities to produce one or more results, wherein the one or more results comprise one or more indications as to which of the plurality of entities has attributes satisfying the one or more rules, and wherein the one or more processors are further configured, when performing, to communicate one or more messages having the one or more indications to an application.

36. In a communication network, a method for evaluating rules, the method comprising the steps of:

receiving one or more rules from an application; and

sending a trigger to said application based on said one or more rules.

37. An article of manufacture for evaluating rules, the article of manufacture comprising:

a computer readable storage medium containing one or more programs which when executed implement the steps of:

receiving one or more rules from an application; and

sending a trigger to said application based on said one or more rules.

38. In a communication network, an apparatus for evaluating rules, the apparatus comprising:

at least one computer system comprising:

one or more memories; and

one or more processors coupled to the one or more memories, the one or more processors configured:

receive one or more rules from an application; and

send a trigger to said application based on said one or more rules.

39. In a communication network, an apparatus for evaluating rules, the apparatus comprising:

at least one computer system comprising:

one or more memories; and

one or more processors coupled to the one or more memories, the one or more processors configured:

receive one or more rules in one or more nodes; and

reduce said one or more rules based on subscribers associated with one or more of said nodes.

40. The apparatus of claim 39, wherein said rule reduction is based on a location of a node.

41. The apparatus of claim 39, wherein said rule reduction is based on one or more attributes of one or more of said subscribers.

42. The apparatus of claim 39, wherein said rule reduction is based on a movement of one or more of said subscribers.

43. In a communication network, a method for evaluating rules, the method comprising the steps of:

receiving one or more rules in one or more nodes; and

reducing said one or more rules based on subscribers associated with one or more of said nodes.

44. The method of claim 43, wherein said rule reduction is based on a location of a node.

45. The method of claim 43, wherein said rule reduction is based on one or more attributes of said one or more of said subscribers.

46. The method of claim 43, wherein said rule reduction is based on a movement of one or more of said subscribers.

EVIDENCE APPENDIX

There is no evidence submitted pursuant to § 1.130, 1.131, or 1.132 or entered by the Examiner and relied upon by appellant.

RELATED PROCEEDINGS APPENDIX

There are no known decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 CFR 41.37.

5